

What is claimed is:

1. A method for determining whether a human immunodeficiency virus type 1 ("HIV-1") has an increased likelihood of having an impaired replication capacity, comprising: detecting whether the reverse transcriptase encoded by said HIV-1
5 exhibits the presence or absence of a mutation associated with impaired replication capacity at amino acid position 98, 100, 101, 103, 106, 108, 179, 181, 188, 190, 225 or 236 of the amino acid sequence of said reverse transcriptase, wherein the presence of said mutation indicates that the HIV-1 has an increased likelihood of having impaired replication capacity, with the proviso that said mutation is not P236L.
- 10 2. The method of claim 1, wherein the mutation associated with impaired replication capacity is selected from the group consisting of A98G, L100I, K101E, K103N, V106A, V106I, V106M, Y181C, Y188A, Y188C, Y188H, Y188L, G190A, G190C, G190E, G190T, G190V, G190Q, G190S and G190V.
3. The method of claim 1, wherein said mutation confers resistance to a non-nucleoside
15 reverse transcriptase inhibitor.
4. The method of claim 3 wherein said non-nucleoside reverse transcriptase inhibitor is nevirapine, delavirdine or efavirenz.
5. A method for determining whether a subject has an HIV-1 with an increased
likelihood of having an impaired replication capacity, comprising: detecting whether
20 the reverse transcriptase encoded by said HIV-1 exhibits the presence or absence of a mutation associated with impaired replication capacity at amino acid position 98, 100, 101, 103, 106, 108, 179, 181, 188, 190, 225 or 236 of the amino acid sequence of said reverse transcriptase, wherein the presence of said mutation indicates that the HIV-1
25 has an increased likelihood of having impaired replication capacity, with the proviso that said mutation is not P236L.
6. The method of claim 5, wherein the mutation associated with impaired replication capacity is selected from the group consisting of A98G, L100I, K101E, K103N, V106A, V106I, V106M, Y181C, Y188A, Y188C, Y188H, Y188L, G190A, G190C, G190E, G190T, G190V, G190Q, G190S and G190V.
- 30 7. The method of claim 5, wherein said mutation confers resistance to a non-nucleoside reverse transcriptase inhibitor.
8. The method of claim 7, wherein said non-nucleoside reverse transcriptase inhibitor is nevirapine, delavirdine or efavirenz.

9. The method of claim 5, wherein the subject is undergoing or has undergone prior treatment with an antiviral drug.
10. The method of claim 1, wherein the method comprises detecting the presence or absence of a mutation associated with impaired replication capacity at at least 2, 3, 4,
5 5, 6, 7, 8, 9, 10, 11 or 12 amino acid positions.
11. The method of claim 10, wherein the method comprises detecting the presence or absence of a mutation associated with impaired replication capacity at amino acid positions 106 and 181; 103 and 190; 103 and 236; 181 and 236; 103 and 188; 103 and 181; 100 and 103; or 98 and 181.
- 10 12. The method of claim 10, wherein the method comprises detecting the presence or absence of a mutation associated with impaired replication capacity selected from the group consisting of: V106A and Y181C; K103N and G109S; P236L and K103N; P236L and Y181C; K103N and G190A; K103N and Y181C; K103N and Y188L; L100I and K103N; and Y181C and A98G.
- 15 13. The method of claim 10, wherein the method comprises detecting the presence or absence of a mutation associated with impaired replication capacity at amino acid positions 103, 181 and 236; 100, 103, and 190; or 103, 181 and 225.
14. The method of claim 10, wherein the method comprises detecting the presence or absence of a mutation associated with impaired replication capacity selected from the
20 group consisting of: P236L, K103N and Y181C; L100I, K103N and G190S; and K103N, Y181C and P225H.
15. The method of claim 2, wherein the method comprises detecting the presence or absence of a mutation associated with impaired replication capacity at at least 2, 3, 4, 5, 6, 7, 8, 9, 10, 11 or 12 amino acid positions.
- 25 16. The method of claim 15, wherein the method comprises detecting the presence or absence of a mutation associated with impaired replication capacity at amino acid positions 106 and 181; 103 and 190; 103 and 236; 181 and 236; 103 and 188; 103 and 181; 100 and 103; or 98 and 181.
17. The method of claim 15, wherein the method comprises detecting the presence or
30 absence of a mutation associated with impaired replication capacity selected from the group consisting of: V106A and Y181C; K103N and G109S; P236L and K103N; P236L and Y181C; K103N and G190A; K103N and Y181C; K103N and Y188L; L100I and K103N; and Y181C and A98G.

18. The method of claim 15, wherein the method comprises detecting the presence or absence of a mutation associated with impaired replication capacity at amino acid positions 103, 181 and 236; 100, 103, and 190; or 103, 181 and 225.
- 5 19. The method of claim 15, wherein the method comprises detecting the presence or absence of a mutation associated with impaired replication capacity selected from the group consisting of: P236L, K103N and Y181C; L100I, K103N and G190S; and K103N, Y181C and P225H.
- 10 20. An isolated oligonucleotide between about 10 and about 40 nucleotides long encoding a portion of a HIV reverse transcriptase in a HIV-1 that comprises at least one mutation at amino acid position 98, 100, 101, 103, 106, 108, 179, 181, 188, 190, 225 or 236 of an amino acid sequence of said reverse transcriptase in said HIV-1, wherein the mutation is associated with reduced susceptibility to a protease inhibitor, with the proviso that said mutation is not P236L.